

DERWENT-ACC-NO: 1985-194387

DERWENT-WEEK: 198532

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TITLE: Joining of silicon carbide sintered  
parts - where joint  
carbon (source) contg. silicon carbide powder and  
silicon material is heated with part contg.

PATENT-ASSIGNEE: NISSAN MOTOR CO LTD [NSMO]

PRIORITY-DATA: 1983JP-0228326 (December 5, 1983)

PATENT-FAMILY:

PUB-NO	PUB-DATE	
LANGUAGE	PAGES	MAIN-IPC
JP 60122774 A	007	July 1, 1985
	N/A	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP 60122774A	N/A	
1983JP-0228326	December 5, 1983	

INT-CL (IPC): C04B037/00

ABSTRACTED-PUB-NO: JP 60122774A

BASIC-ABSTRACT:

Joint including SiC-powder and carbon-powder or carbon-source material is heated with the joining part contg. Si. Si should be contained in either joining part, which functions as Si source in SiC reaction.

USE/ADVANTAGE - The present method enables junction of SiC ceramic parts in order to obtain complicated structures.

In an example, 80g powdered SiC, 20g carbon and 15g phenol resin were mixed and slurrified to finally obtain 105-210 micron pellets. Pellets were press formed to obtain semi-prods. Joint surfaces were polished with size 400 diamond grindstones. Paste contg. 80g SiC, 10g C and 60g phenol resin was painted on the joint, and heated at 1550 deg.C in vacuum (0.01 mmHg) for 2 hrs. The strength of the joint were: 30.1 (at R.T.) and 29.4 (at 1000 deg.C) (kgf/mm<sup>2</sup>).

CHOSEN-DRAWING: Dwg. 0/6

DERWENT-CLASS: A97 L02

CPI-CODES: A05-C01; A12-W12D; L02-H02A; L02-J02C;